



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/628,477

07/29/2003

Takahiro Aoki

1614.1351

4692

21171 7590 03/03/2009  
STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

LIEW, ALEX KOK SOON

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/628,477	<b>Applicant(s)</b> AOKI ET AL.	
	<b>Examiner</b> ALEX LIEW	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2624

1. The amendment filed on 11/10/08 is entered and made of record.
2. Response to applicant's arguments

On page 6, the applicant stated:

"Claim 1 of the application recites an image extraction method in which at least a surface of the background is formed by an organic dye.

The Examiner acknowledged that Smoot does not disclose such a feature, but alleged that such a feature is disclosed in O'Meara, and further alleged that it would be obvious to modify the disclosure of Smoot to include the feature."

The examiner agrees; Examiner found Nelson (US pat no 6,775,381) which discloses such feature.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 and 10 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit

---

<sup>1</sup> *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

Art Unit: 2624

decisions<sup>2</sup> indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **image extraction** method including steps of image pick up step and extracting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot (US pat no 5,940,139) in view of Nelson (US pat no 6,775,381).

With regards to claim 1, Smoot discloses an image extraction method, comprising:

---

<sup>2</sup> *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Art Unit: 2624

a first image pickup step to pick up an image of an object positioned in front of a background using wavelengths in a visible light region (see column 2, lines 50-52);

a second image pickup step to pick up an image of the object positioned in front of the background using wavelengths in an infrared region (see column 2, lines 53-55);  
and

an extracting step to extracting step to extract only the object based on the images picked up by the first and second image pickup steps (see column 3, lines 13-26).

Smoot does not disclose a surface of the background is formed by an organic dye.

Nelson discloses a surface of the background is formed by an dye (column 2, lines 19-29).

One skilled in the art would include a surface of the background is formed by a dye or any form of dye is because dye provides increase in brightness and shading which further distinguish between the object and background in an image.

With regards to claim 2, Smoot discloses extracting step extracts the object from the image picked up by the first image pickup step depending on color, and extracts the object from the image picked up by the second image pickup step depending on luminance (see column 7, lines 20-23, the color of the object is inherently extracted).

With regards to claim 10, see the rationale for claim 1.

Art Unit: 2624

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot '139 in view of Nelson '381 as applied to claim 1 further in view of O'Meara (US pat no 3,544,771).

With regards to claim 3, Smoot discloses all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose dye has a color selected from a group consisting of blue-green color, gold color and silver color. O'Meara suggests selecting the background color as gray and the color of the object as black. Selecting dye color from group of consisting of blue-green color, gold color and silver color is a matter of choice. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include Selecting dye color from group of consisting of blue-green color, gold color and silver color is a matter of choice because the energy in the form of electromagnetic radiation such as light is direct to the background dye and object will produce distinguishable series of pulse signal showing the location of object and the background area, so one would be able to easily locate the object.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot '139 in view of Nelson '381 as applied to claim 1 further in view of Rohr (US pub no 2002/0098435).

Art Unit: 2624

With regards to claim 4, Smoot and Nelson disclose all the limitations of claim 1, but do not disclose organic dye has a color of phthalocyanine organic dye. Rohr discloses organic dye has a color of phthalocyanine organic dye (see paragraph 22). One skilled in the art would include because to allow the dye to with stand light radiation to prevent the dye from coming off from the background image, so the dye in the background can last longer.

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot ('139) in view of Nelson '381 and Okazaki (US pat no 6,873,713).

With regards to claim 5, see the rationale and rejection for claim 1. In addition, Okazaki discloses a matching section to compare the image extracted by the extracting section and registered object images and to output a result of comparison as an authentication result (see column 3, lines 19 to 33, a plurality of images are taken from different views, the first image taken is read as the image taken from first imager and second image taken is read as the image taken from second imager, the average brightness is compared between the first, second and to the registered image). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a matching section because to identify the individual to prevent tress passers from entering any secure facility to improve security.

With regards to claim 6, see the rationale and rejection for claim 2.

With regards to claim 7, see the rationale for claim 5.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot ('139) in view of Nelson '381 and Okazaki '713 as applied to claim 5 further in view O'Meara '771.

With regards to claim 8, see the rationale and rejection for claim 3.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smoot ('139) in view of Nelson '381 and Okazaki '713 as applied to claim 5 further in view Rohr '435.

With regards to claim 9, see the rationale for claim 4.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX LIEW whose telephone number is (571)272-8623 or cell (917)763-1192. The examiner can be reached anytime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew C Bella/  
Supervisory Patent Examiner, Art  
Unit 2624

Alex Liew  
AU2624  
3/1/09